Pseudoboletia indiana.

Absolute diameter, in millim.	Percentage value of			
	Height.	Actino-stome.	Abactinal area.	Anal area.
70	45·7	42·1	16·4	7·1
53	47·1	42·4	15	...
52	49·4	40	12·3	...

Echinostrephus.

For the present it is not possible to do more than give the accompanying table of measurements; when any change is made in the position of this curious genus, it should be based on a fuller knowledge of its life-history than we at present possess. In the meantime, in its unusual form it stands alone, not only among the Echinometridæ, but among all the Echinidæ. The smallest specimen measured (which is also smaller than any measured by Prof. Alex. Agassiz) would seem to show that there is, during the rather earlier stages, a considerable diminution in the proportional values of the abactinal and actinal areas.

Echinostrephus molare.

Absolute diameter, in millim.	Percentage value of			
	Height.	Actino-stome.	Abactinal area.	Anal area.
14·5	48·2	44·8	27·5	13·5
25	54	38	23	10
26·5	49	32	22·6	...

2. Description of a New Species of the Genus *Mespilia*. By F. Jeffrey Bell, M.A., F.Z.S.

[Received February 24, 1881.]

When, last year, I was engaged in naming and revising the specimens of Temnopleuridæ in the British Museum, I was unable to satisfy myself as to the exact specific nature of the specimen now to be described, and which I propose to name after its discoverer.

Mespilia whitmæi, n. sp.

The examination of this species revives nearly all the difficulties as to the definition of the genera *Mespilia* and *Amblypneustes*. The

special point which characterizes this new species will perhaps bring into prominence the whole question of the real affinities of these forms: it is the well-marked character of the gill-cuts of the actinostome, which, in the only species of the genus known hitherto, are so very feebly developed.

The specimen on which the following description is based was presented by the Rev. S. J. Whitmee, and is stated to have come from the Samoa Islands. It is in the dry condition. The test, from above, is obscurely pentagonal in form, and not at all high; the spines are delicate, yellowish or greenish yellow in ground-colour, and banded or tipped with red; they are richly developed over the whole surface of the test, with the exception of the middle portion of the interambulacral areæ. In correspondence with this there is, of course, a portion of the interambulacral plates devoid of primary tubercles; but this is only seen above the ambitus; this bare band is much narrower than in *M. globulus*. At the ambitus there are four large primary tubercles in a row on either side of the middle line; the space on either side of these is occupied by smaller tubercles, which are not quite so regularly arranged; as we pass nearer the actinostome, first these latter tubercles and then the outer primary tubercles disappear; those that remain retain or even exceed the size of those at the ambitus.

In the ambulacral areæ a row of four tubercles on either side can likewise be made out at the ambitus. In having the same number of primary tubercles in the interambulacral as in the ambulacral area this species differs from *M. globulus*, which, however, it resembles in having the largest and most conspicuous of the interambulacral tubercles nearest to the poriferous zone. There is but a very feebly developed, bare, intraambulacral space; but the sutural pores between the plates are more conspicuous in the ambulacral than in the interambulacral areæ.

The gill-cuts are well marked and wide. The auricular foramen is large, much larger than in *M. globulus*, and quite as large as, if not larger than, that of *Amblypneustes pallidus*. The connecting ridge is low, and, at its middle point, is produced into a short, pointed, upwardly-directed process; the actinostome is moderately large.

The abactinal area is by no means small; all the oculars remain shut out from the edge of the anal area; and in no essential point does it differ in character from that of *M. globulus*; there is a rich supply of tubercles; and the peripheral anal plates are large and tuberculated. The poriferous zone is not so wide as in *M. globulus*; but the pairs of pores are still arranged in two vertical rows, and the number of those in the outer seems to be about double those in the inner row.

The foramen of the pyramid is perhaps a little larger than in *M. globulus*; as in it, the radius is not bifid at its free end; but its spatulate character is very much more developed.

The general ground-colour of the test is greyish brown; the tubercles are yellowish or whitish.

This new species is at once to be distinguished from *M. globulus* by (1) its well-marked gill-cnts, (2) the extreme narrowness of the median bare space and the consequent increase in the number of the tubercles, (3) the more spatulate character of the free end of the radius.

When its proportional measurements are compared with the specimen of an absolute diameter of 36 millim.[1] we find the new species to be not so high, and to have the actinal, abactinal, and anal areas all proportionally a little larger.

Diam.	Height.	Abactinal area.	Anal area.	Actino-stome.
38	22	7·25	3·5	12
	[57·9]	[19]	[9·2]	[31·5]

The numbers in brackets are the percentage values.

3. Contributions to the Anatomy of Passerine Birds.—Part IV.[2] On some Points in the Anatomy of the Genus *Conopophaga*, and its Systematic Position. By W. A. Forbes, B.A., Prosector to the Society.

[Received February 28, 1881.]

As regards the true relationships of the genus *Conopophaga* considerable doubt has hitherto prevailed amongst systematic zoologists. By Sundevall[3] it was placed amongst the Tyrannidæ, on account of its depressed beak and the nature of its tarsal scutellation. Messrs. Sclater and Salvin, in their valuable 'Nomenclator Avium Neotropicalium'[4], followed Sundevall—the Conopophaginæ, consisting of the genera *Conopophaga* and *Corythopis*, therein forming the first subfamily of the Oligomyodian Tyrannidæ. All these authors, however, had overlooked the fact that Johannes Müller, in his classical memoir on the Voice-organs of the Passerinæ[5], had described the syrinx of *Conopophaga aurita*, and had found it to be completely tracheophone, that of the Tyrannidæ having, of course, no such structure. Garrod was, no doubt, aware of Müller's results; for in his proposed rearrangement of the Tracheophone Passeres[6], he made the "Conopophagidæ" a distinct family, which he placed between the Dendrocolaptidæ and the Formicariidæ. No reasons, however, for the change were there given.

A few days ago Mr. Salvin called my attention to the fact that in a skeleton of *Conopophaga melanops*, lately acquired for the Cambridge

[1] P. Z. S. 1880, p. 435.
[2] For Part III. see P. Z. S. 1880, p. 387.
[3] Tentamen, p. 60: Stockholm, 1872.
[4] *L. c.* p. 41: London, 1873.
[5] Ueber d. Stimmorgane &c., p. 39: Berlin, 1847. Garrod's edition, p. 32.
[6] P. Z. S. 1877, p. 452.